# Introduction to Binary

**Grade Level:** Middle/HS  
**Subject:** Computer Applications  
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## Overview & Purpose
Students will gain a basic understanding of what binary is and why computers use it.

## Objectives
(Specify skills/information that will be learned.)

- Student will gain a basic understanding of what binary is and how computers use it.
- Student will be able to execute simple calculations converting base 10 numbers into binary.

## Information
(Give and/or demonstrate necessary information)

- Discuss how computers process information.
- Use Binary Alice world to engage students in understanding what binary is.

## Verification
(Steps to check for student understanding)

- After completing the Binary Alice world tutorial – give students handouts from CSUnplugged page 7 & 8 to further understand binary.
- Complete worksheets given to you by instructor.

## Activity
(Describe the independent activity to reinforce this lesson)

- Give students a copy of page 5 cards. Students should complete exercises 10 & 11 for homework. These activities ask the to stretch beyond the basics taught in class.
- Read exercises 10 & 11 carefully before beginning. These activities take you beyond what you have learned in the classroom. Use your critical thinking skills to expand your knowledge. Use the card manipulative provided for you and refer to the Binary Alice world for review.

## Summary
Student understands that computers “speak” a different language. They process information using the base 2 or binary.